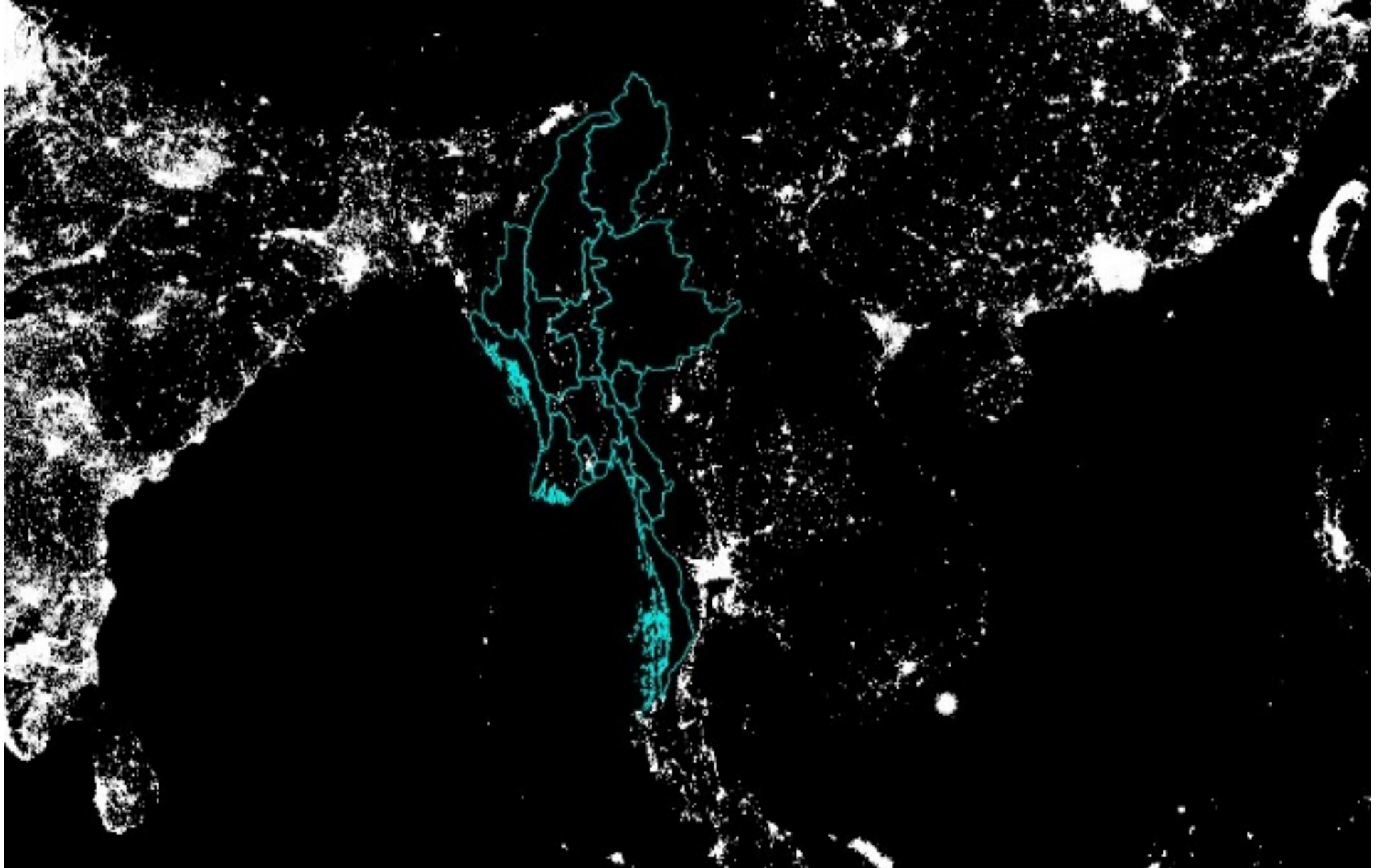
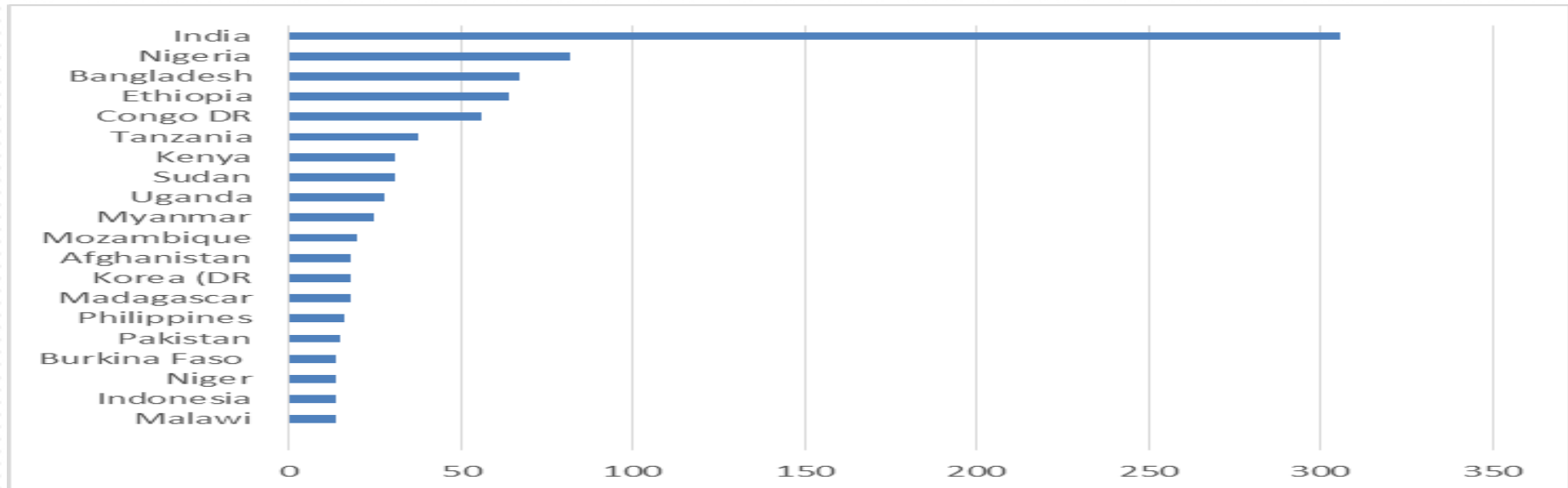


# IFC Energy Access – Myanmar

*(Lighting Myanmar)*



# Myanmar One of Largest Unelectrified Populations Globally



Electricity Access Deficit, Top  
20 Countries (population  
millions), SE4A

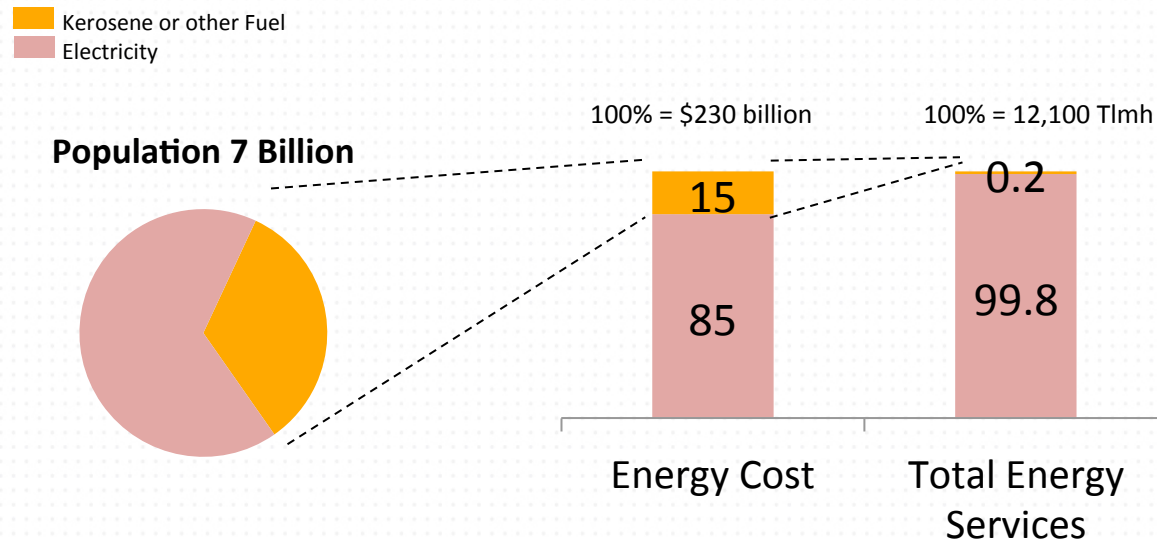


## Density versus Distance



# Lighting Equity

Although one in three people obtain light with kerosene and other fuels, representing about 15% of global lighting costs, they receive only 0.2% of the resulting lighting energy services



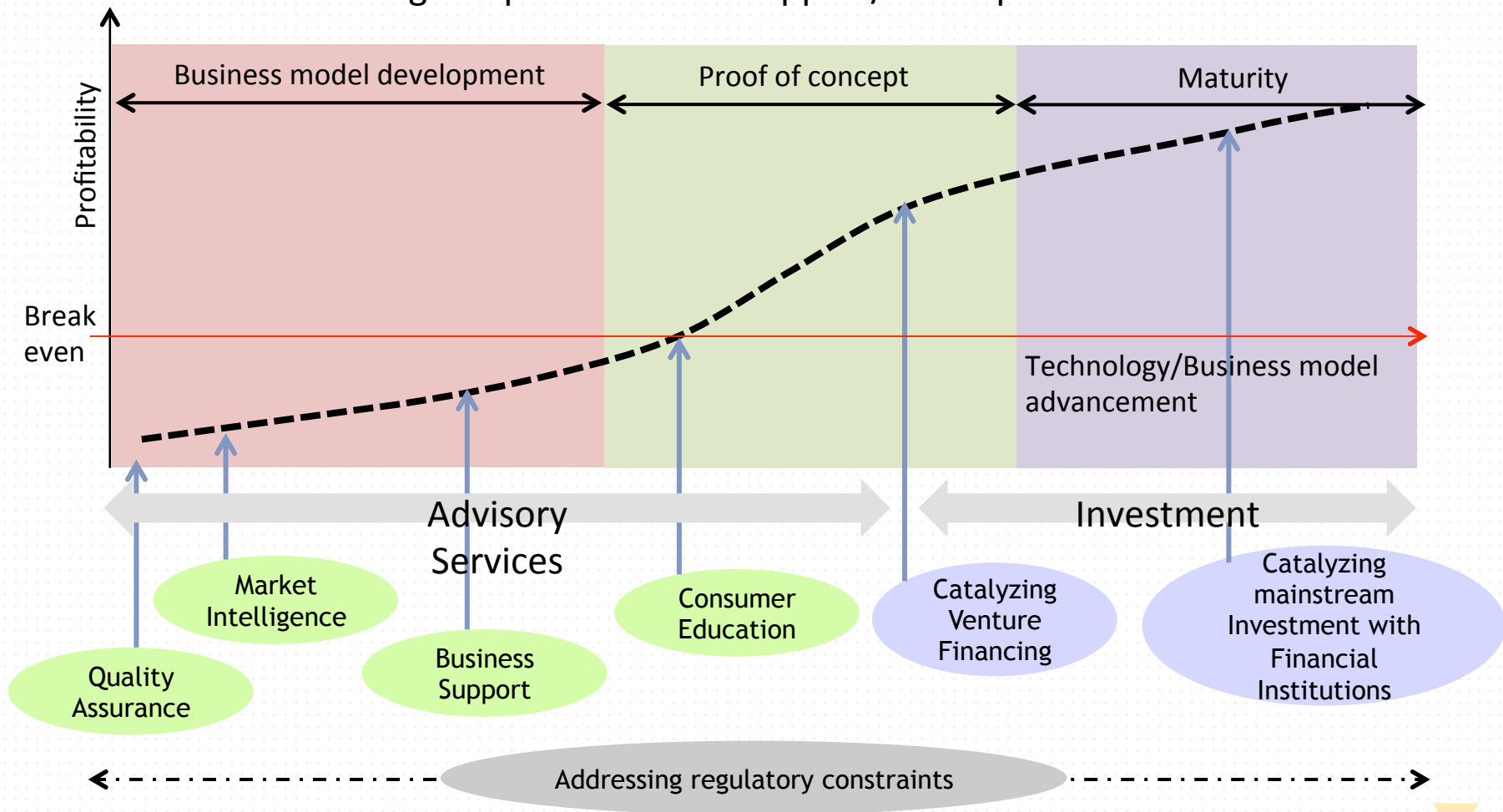
Source: Evan Mills, Lawrence Berkeley National Laboratory



Driving the Market  
*The Lighting Global Experience*

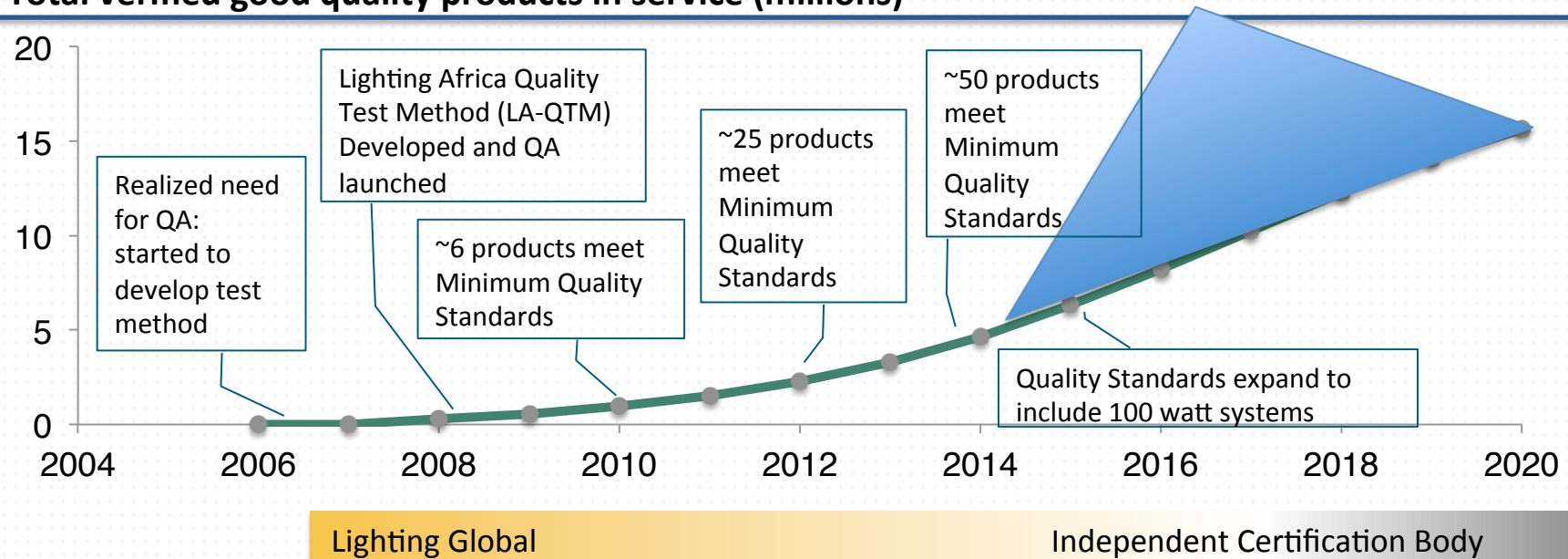
# Catalyzing market development

Lighting Global operates along the market transformation curve, focusing on specific market support/development activities



# Quality Assurance is foundational to growing market

Total verified good quality products in service (millions)



## Credibility

Lighting Global QA program has focused on building credibility [rigorous and independent]

## Consumer education

Invested heavily in consumer education in a few markets

## Stability

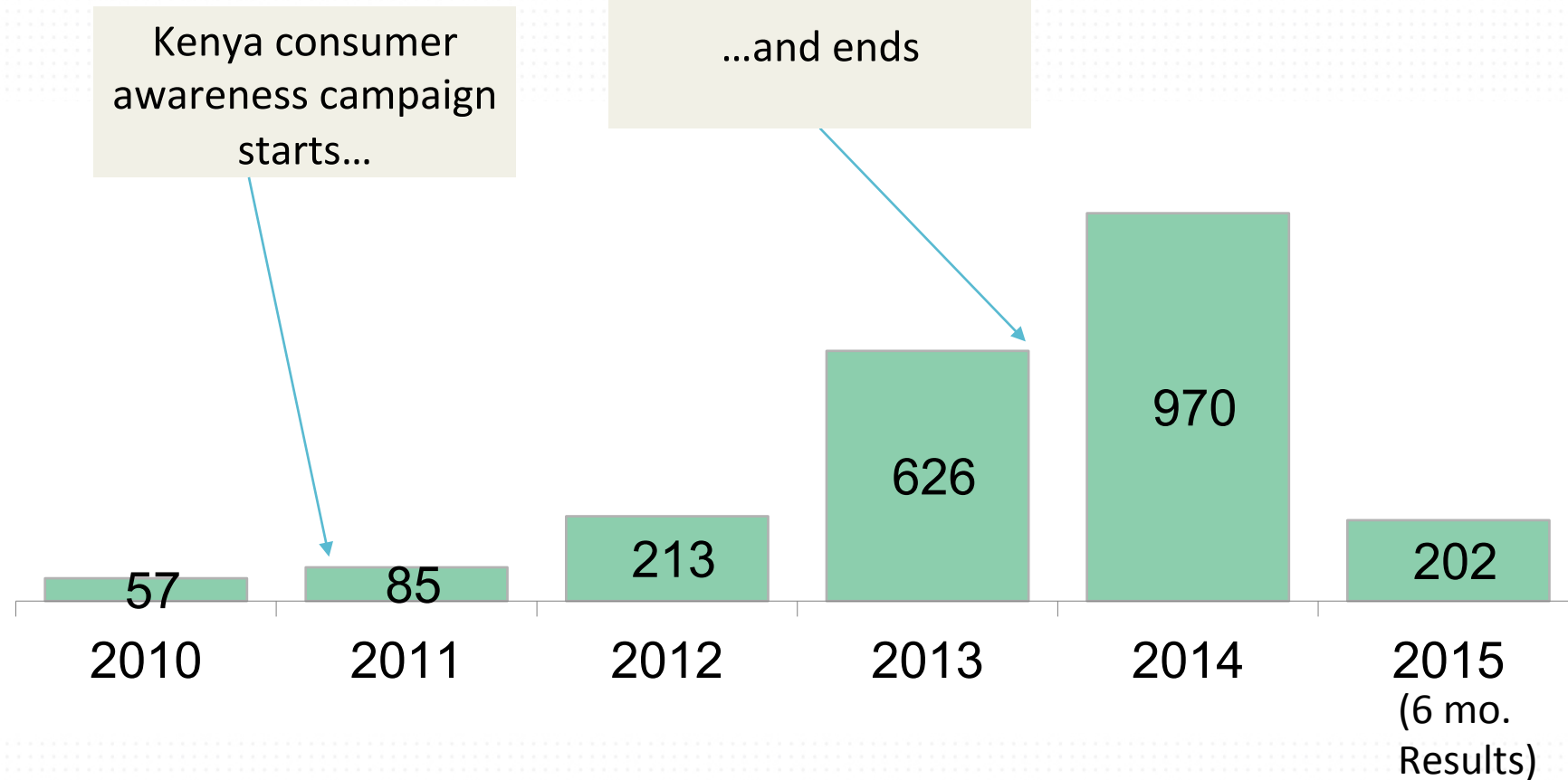
Need to maintain stability in transition

Source: Lighting Global IFC Team

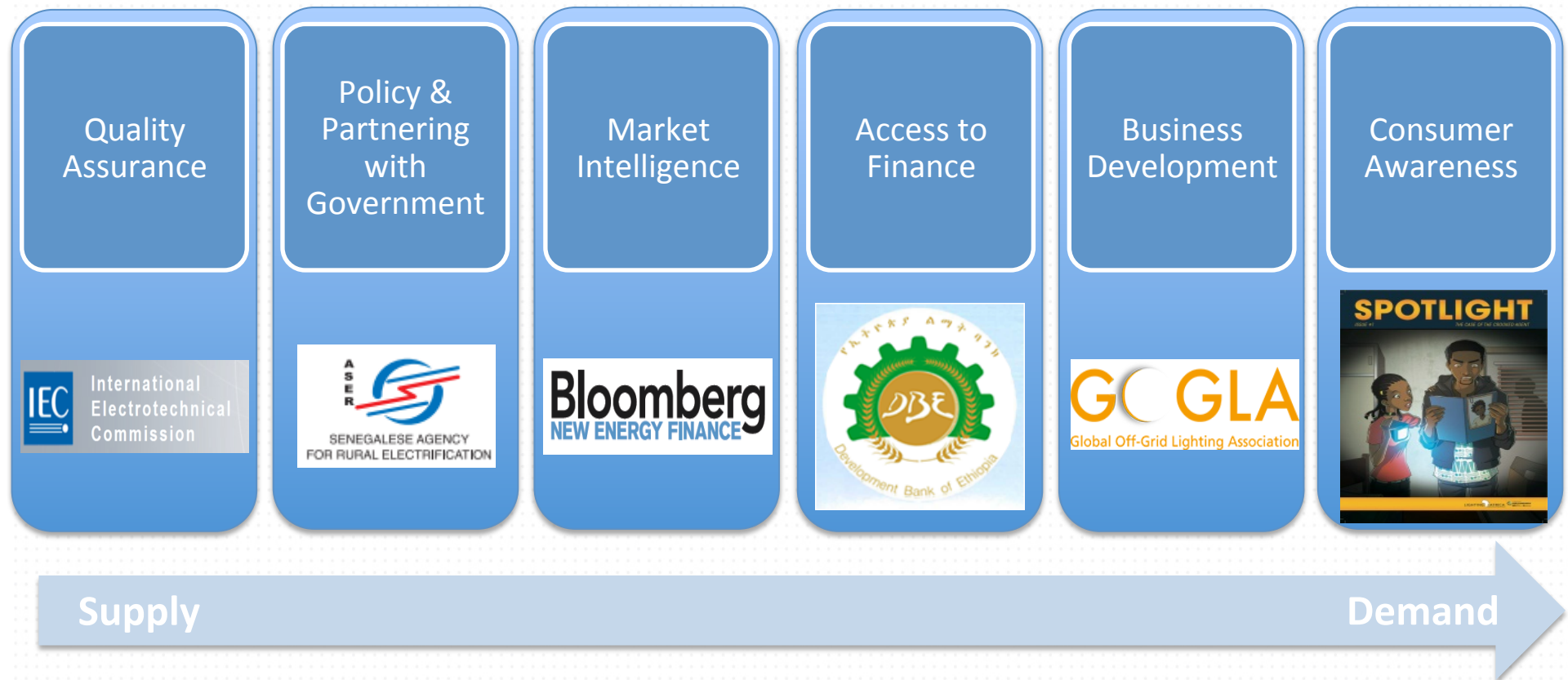
# Consumer Education Campaigns: Marketing Collaboration with our Partners



# Kenya: Lighting Africa interventions and sales of lighting global quality-verified solar lights (thousand units)

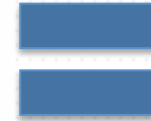


Lighting Global's strength comes from a programmatic approach that addresses both supply and demand.



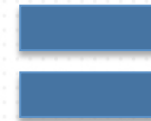
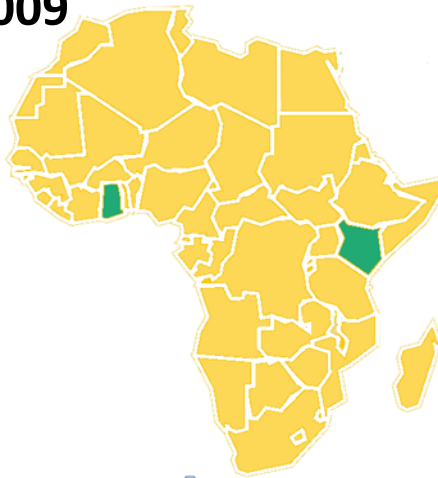
Lighting Global operates in 16 countries with 52 quality-verified products from 25 manufacturers currently in the market.

2015



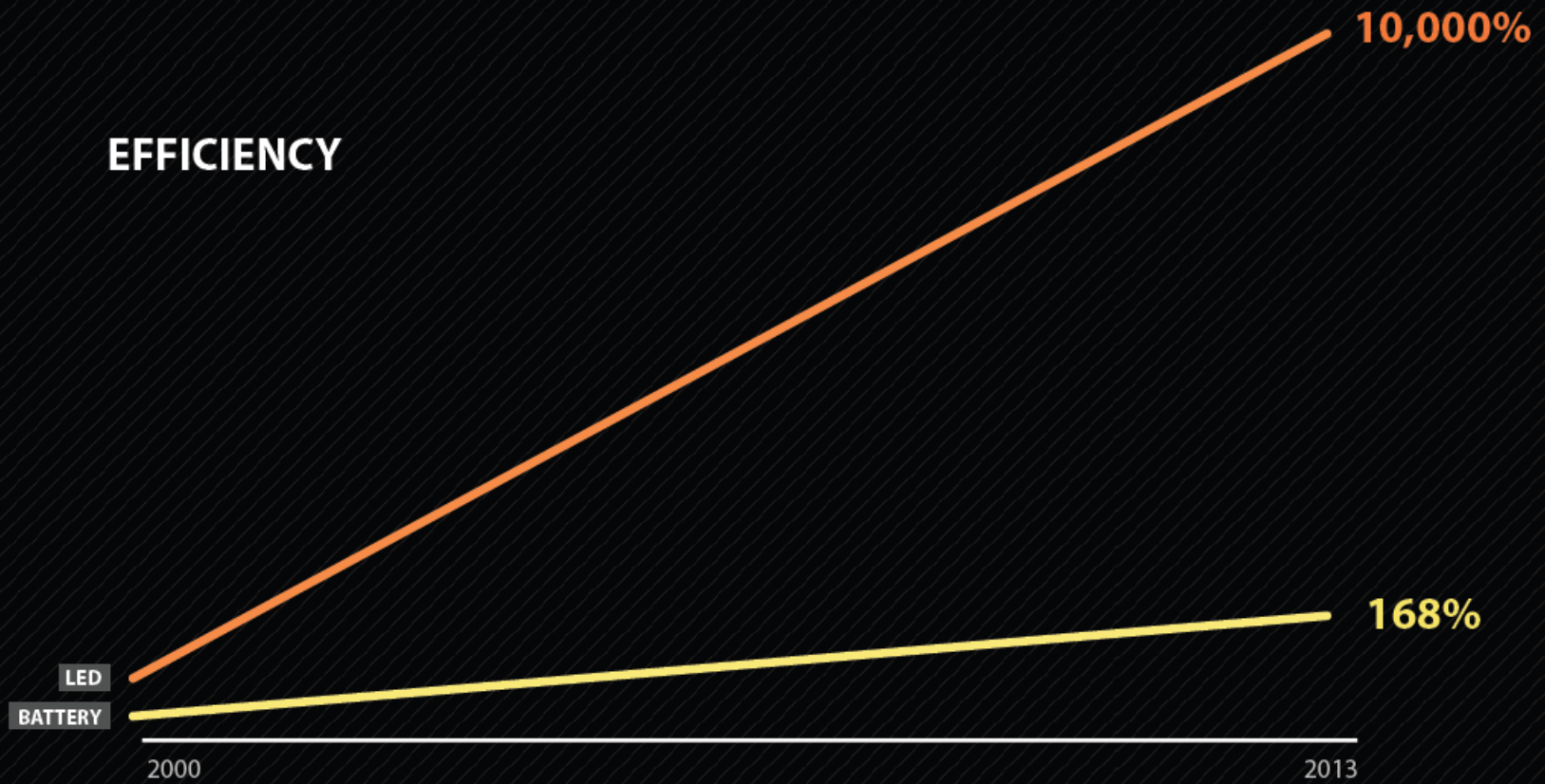
**20 million**  
products sold

2009



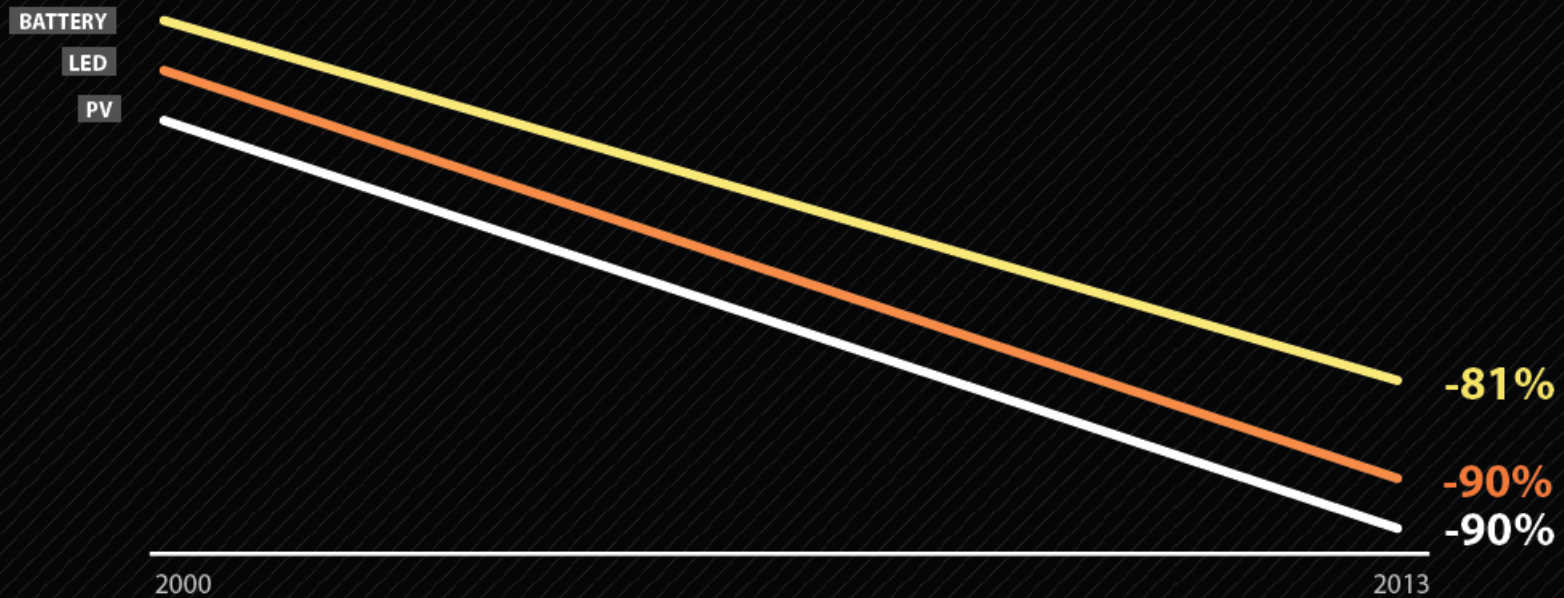
**42,000**  
products sold

# EFFICIENCY



© 2014 d.light design. All rights reserved

## COST REDUCTION



© 2014 d.light design. All rights reserved

“Off-grid solar” refers to the following products:  
pico-PV lighting and Solar Home Systems.



< 10 Wp

# Pico-PV lighting products



$< 100 \text{ Wp}$

# Solar Home Systems

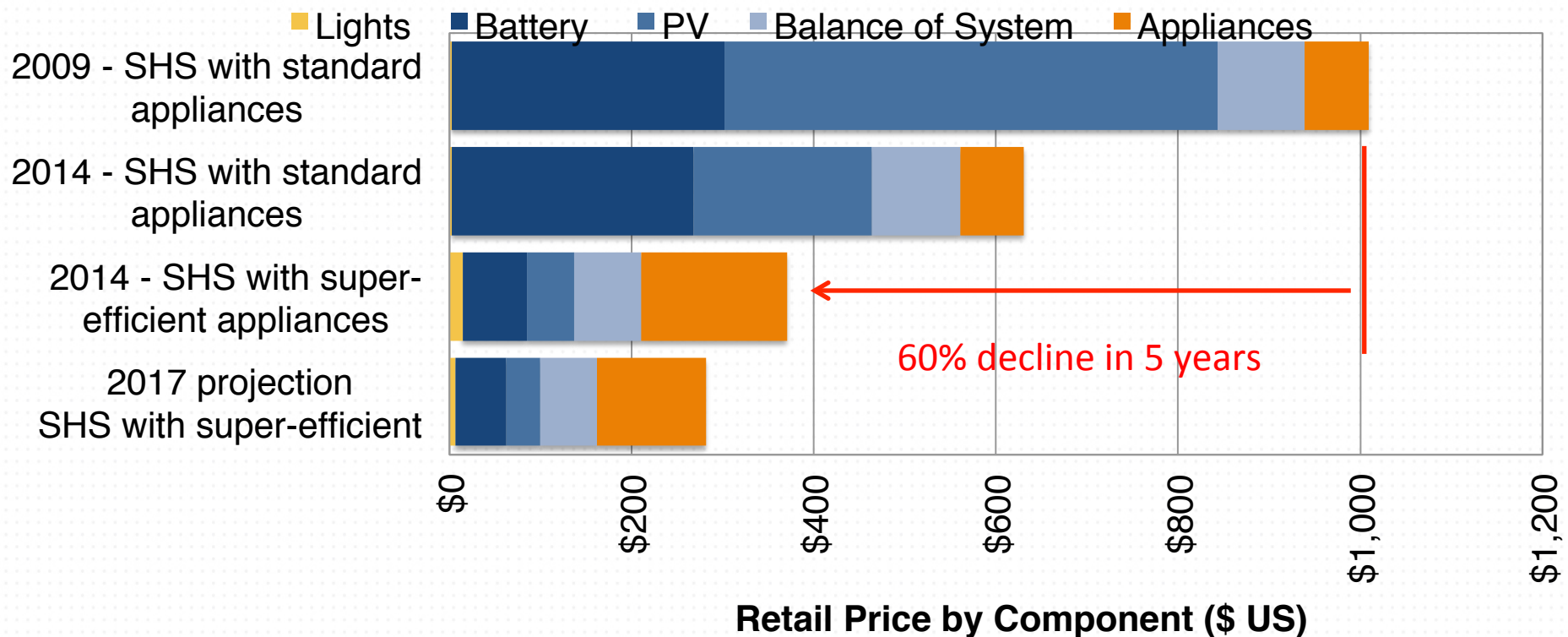
# What about larger systems?

## High Efficiency DC Appliances Are Contributing to Solar Home System Affordability

---



As the cost of Solar Home Systems has fallen dramatically, they have become a viable alternative to the grid.

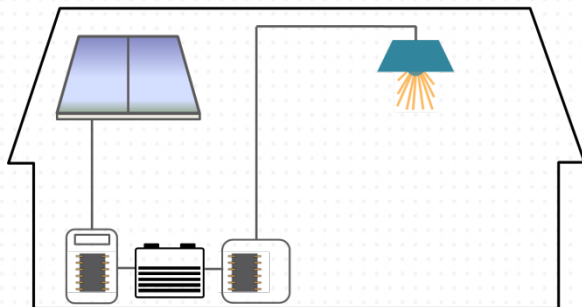


The market for energy efficient appliances is growing in response to rapidly emerging willingness to pay for quality energy services.

---

**Ten years ago**, 40 W solar panel powered:

- a single 25 W incandescent bulb for 5 hours per day



**Today**, same 40 W solar panel powers:

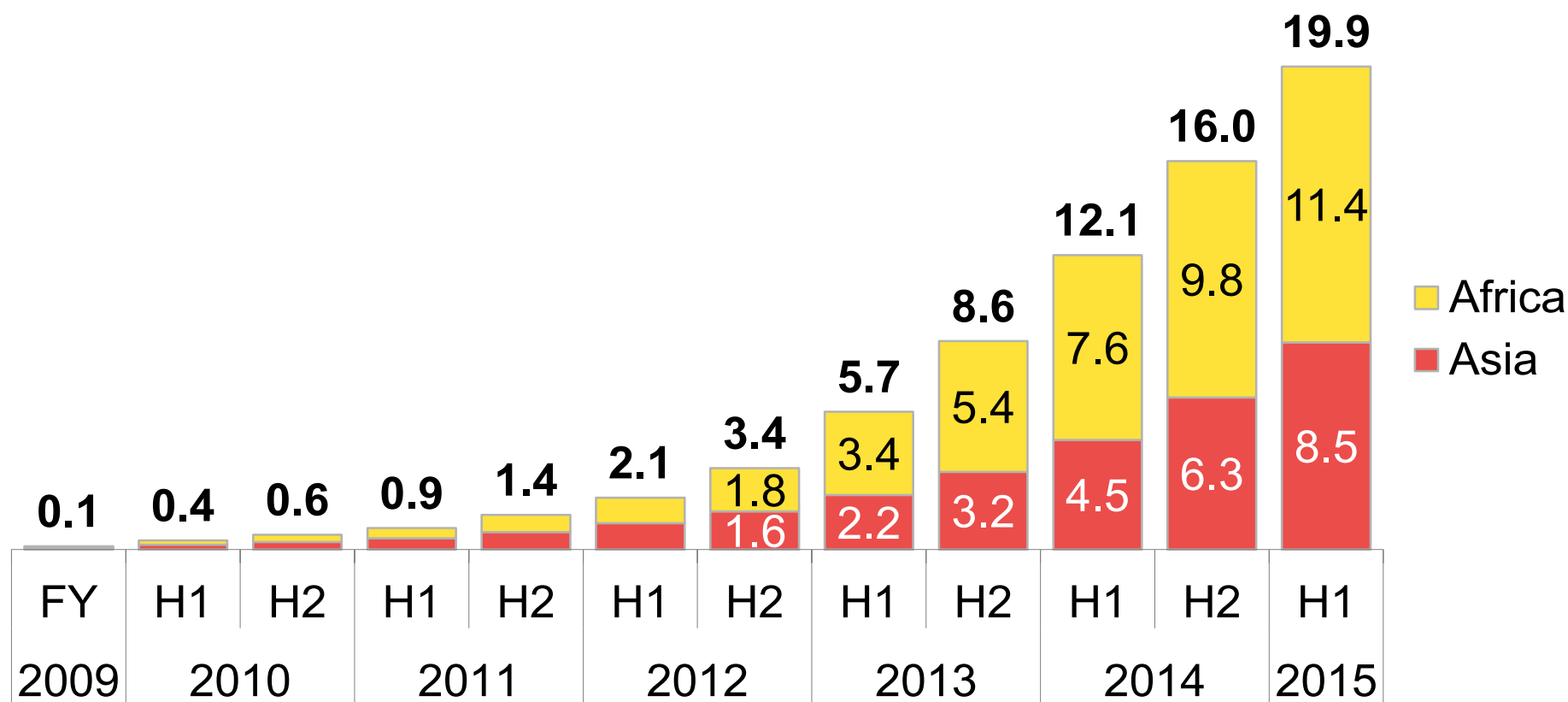
- four LED lights for 5 hours, and color TV for 4 hours, and
- phone charger for 3 hours, and
- radio for 6 hours



We're enabling BoP consumers to climb the energy access ladder.

	Pico-powered Lighting Sys.	Solar Home System	Micro / Mini-Grid	Regional Grid
<b>Scale (~Watts)</b>	1 – 10	10 – 100's	100's – 1000's	$10^6 - 10^{11}$
<b>Topology</b>	DC Only	DC – some AC	Mostly AC	Nearly all AC
<b>Loads</b>	<div>Lighting and Phone Charging</div> <div>Television and Fans</div> <div>Range of Appliances</div> <div>Industrial Power</div>			
<b>SE4ALL Tiers</b>	1	2 to 3	1 to 5	4 to 5
	US\$ 10-120	US\$ 140-1000	Highly variable	Highly variable

# Estimated sales of Branded pico solar lights (millions of units, cumulative)



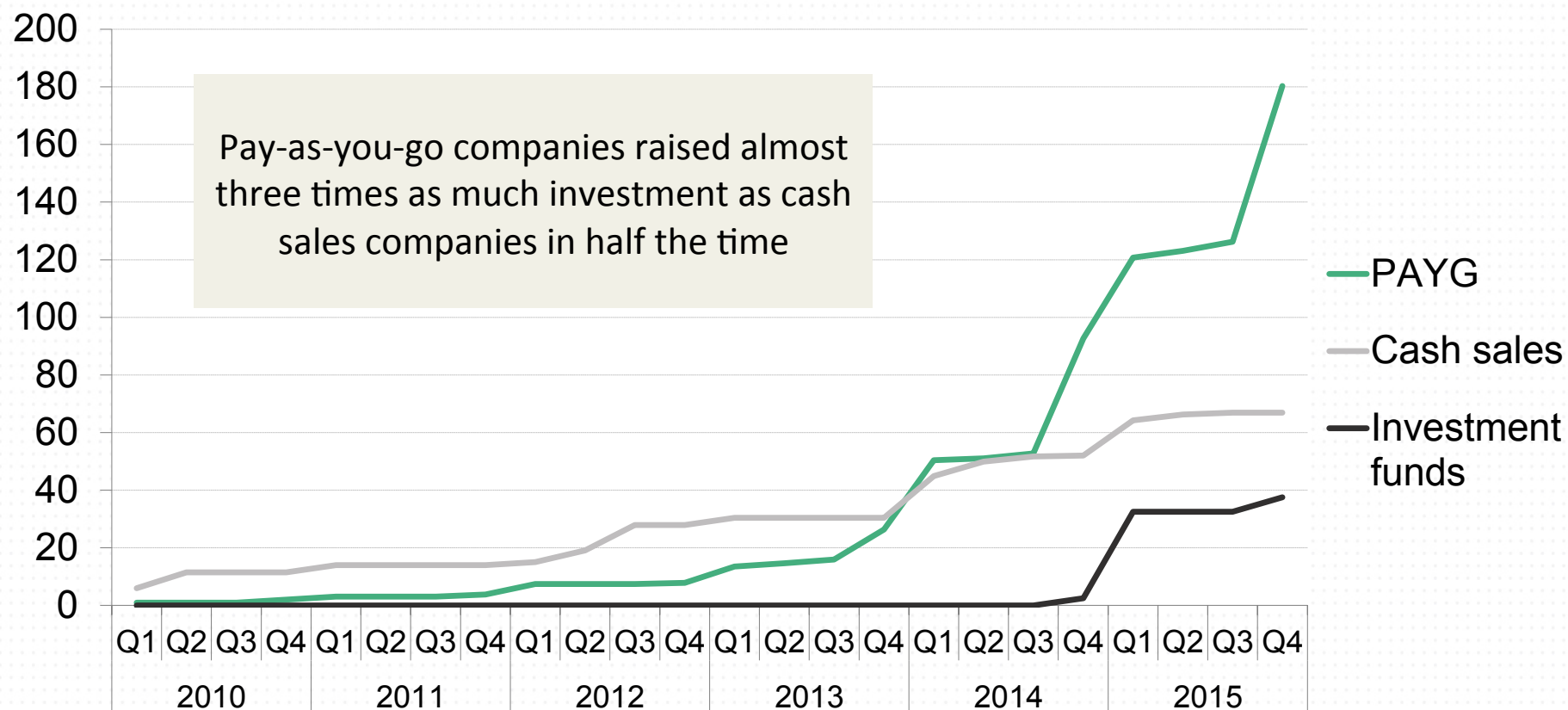
Note: Data is based on sales data of Lighting Global quality verified product, conversations with and announcements of other market players and BNEF estimates for reporting gaps.

# Off-grid solar lighting in numbers

---

1. **20m** brand-quality portable solar lights had been sold by July 2015.
2. **89m people** in the developing world have at least one solar lighting product in their household already, and **21m people** have been lifted to the first rung of the energy ladder by pico-PV products.
3. Consumers save on average **\$3.15** for every dollar spent on pico-PV in Africa.
4. **87%** of direct investments into off-grid solar companies in 2014 and 2015 have gone to pay-as-you-go companies.
5. Annual investments into the sector (incl. specialised intermediaries) have risen fifteen-fold since 2012, to **\$276m** in 2015.
6. About **one in three off-grid households** will use off-grid solar by 2020, according to our baseline forecast.
7. Unit sales will grow at a **34% CAGR** in the next five years, according to our baseline forecast.
8. **15m TVs** are likely to be solar-powered by 2020, according to our baseline forecast.

# TRACKED INVESTMENTS IN OFF-grid Solar by recipient type (USD m cumulative)



Note: shown data excludes USD 40m of investments with undisclosed date and \$27m of aggregate data for which the recipient type could not be determined.